Claims

1. An isolated nucleic acid coding for a dominant negative, mutant HSP22 polypeptide, said nucleic acid containing in comparison to the wild type HSP22 encoding sequence set forth in SEQ ID NO: 1 one or more mutations wherein the presence of said nucleic acid is indicative for the presence of a motor neuron disorder.
2. An isolated nucleic acid according to claim 1 wherein the presence of said nucleic acid is indicative for distal hereditary motor neuropathy type II.
3. An isolated nucleic acid according to claims 1 and 2 wherein said mutations of HSP22 are set forth in Table 1.
4. A nucleic acid probe, which is a fragment of the nucleic acid sequences according to, claims 1-3.
5. A recombinant vector comprising an isolated nucleic acid according to claims 1-4.
6. A host cell comprising a recombinant vector according to claim 5.
7. A method for the preparation of a diagnostic assay to detect the presence of a motor neuron disorder in a human comprising detecting at least one mutation in the nucleotide position of SEQ ID NO: 1 in a tissue sample of said human, wherein said mutation respectively results in a dominant mutation of HSP22 and wherein the presence of said mutation is indicative of the presence of a motor neuron disorder.
8. A method according to claim 7 wherein said mutations for HSP22 are set forth in Table 1.
9. A transgenic non-human animal comprising a vector according to claim 5.
10. Use of HSP22 for the manufacture of medicament for the treatment of a motor neuron disorder.
11. Use of HSP22 according to claim 10 wherein said motor neuron disorder is hereditary motor neuropathy type II.